

Lead Poisoning: ALL in the FAMILY



UT EXTENSION
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

Bonnie L. Hinds
Environmental Show of the South
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The History of Lead Poisoning (Plumbism)

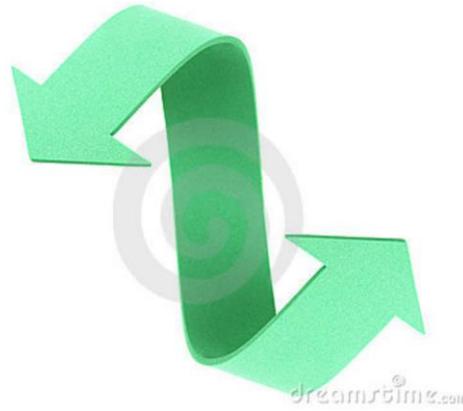
Implicated in the fall of
the Roman Empire . . .



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
		Loyalty Day				
6	7	8	9	10	11	12
13	14	15	16	17	18	19
Mother's Day					Armed Forces Day	
20	21	22	23	24	25	26
27	28	29	30	31		
		Memorial Day				

Leading Sources of Lead Poisoning:

Adults – Occupational Exposure – 95%



Children – Housing

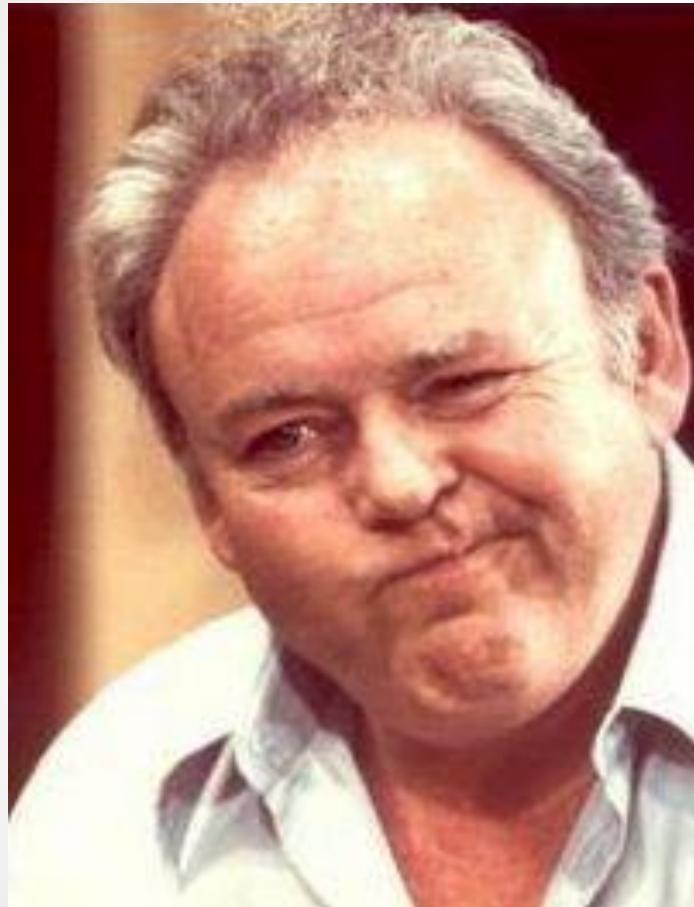
All in the Family: 1971-1979



**704 Houser Street
Queens**

Archie Bunker: Lead Poisoning Victim?

**Archibald Bunker,
child . . .**



**Born May 20, 1924
--in Baltimore**

Grew up in extreme poverty.
Father worked for the railroad
in some capacity
and was known to be
mentally abusive.

Attended high school in
Flushing, NY

High-Risk Occupations/Activities:

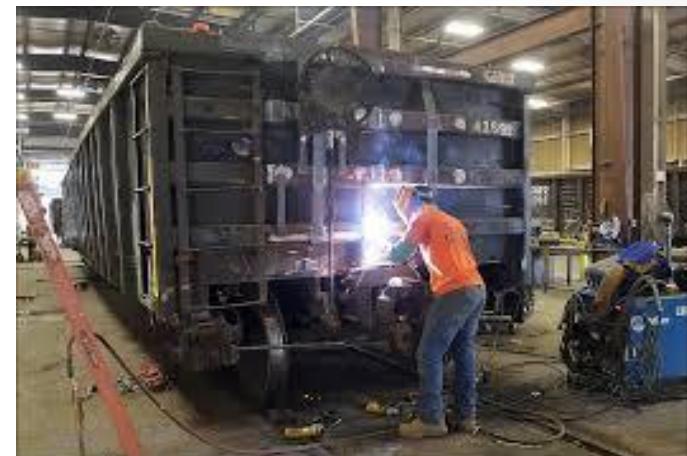
Painting

Welding, cutting, soldering, brazing
“Railroad equipment”

Signal & track switch repair

“Highway and railroad bridge demolition”

Construction and demolition
Plastic and rubber manufacturing
Battery manufacturing
Paper hanging
Ship building
Brass foundries





Occupational
Safety and Health
Administration

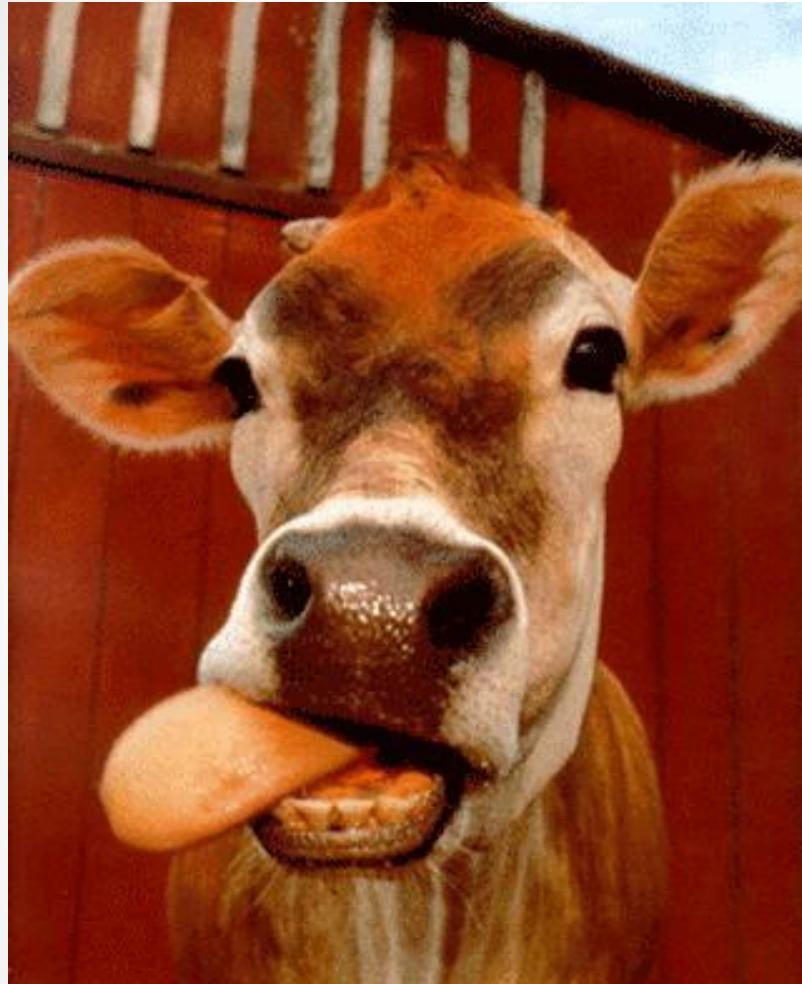
www.osha.gov

Lead: 1910.1025

An estimated 1.6 million American workers are exposed to lead from occupational sources *today*.

OSHA was established by Congress in December of 1970.

Lead Exposure Routes:



Lick/Swallow or
Ingestion or



Sniff
Inhalation

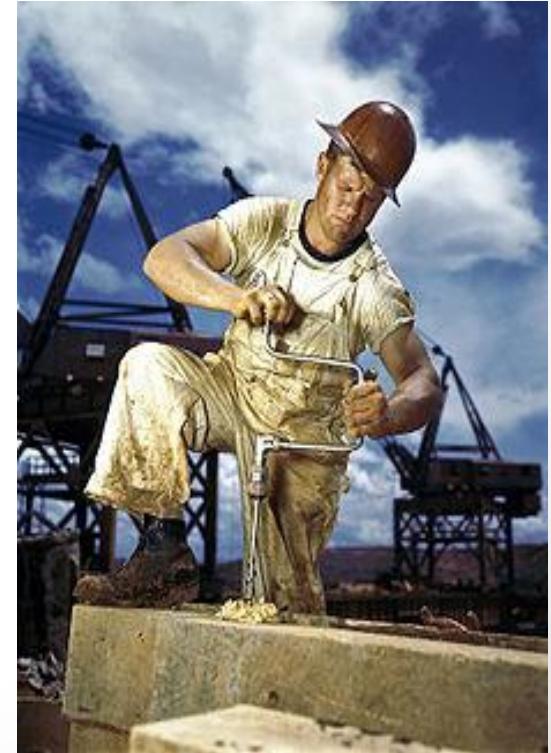
Lead Absorption and Retention

- Children absorb **50 percent** of **ingested** lead and retain at least **30 percent**.
- Adults absorb **15 percent** of **ingested** lead and retain less than **five percent**.
- Both children and adults absorb and retain as much as **70 percent of** inhaled lead.

How Does Lead Come Home?



Maine 2008:
Six children
poisoned from
lead dust
migration—
job to car seat.



Or – Is Lead Already AT Home?



NYC tenement – circa 1900
Tenements housed 2/3 of NYC population.*

*"The Rise of Tenement Housing," <https://www.history.com>

The Evolution of Plumbing



gritzmacher.net



Archie Bunker: Lead Poisoning Victim?



**Archie Bunker,
adult . . .**

World War II veteran
(Awarded the Purple Heart for
wounding/shrapnel.)

**Loading dock foreman;
Janitor;
Taxi driver**

Father of one child

Lead in Ammunition



German Karabiner 43

Italian Carcano



Today, the military is phasing out lead in ammunition, replacing it with copper (known as green bullets), a more expensive product.



Leaded gasoline not banned for use in passenger vehicles until the **Clean Air Act** – Effective January 1, 1996.





Reproductive Ramifications of Lead Poisoning:

Decreased libido
Impotence

Decreased fertility

Miscarriage

Stillbirth

Low birth weight

Gloria Bunker Stivic

Health Impacts of Lead Poisoning



- Digestive complaints
- Sleep difficulties
- Headache
- Hypertension
- Kidney disease
- Anemia
- Impaired hearing
- Peripheral neuropathy

Most lead poisoned children have **no** physiological symptoms—or very vague complaints easily dismissed as minor childhood illnesses.

Children's Brain Development



Fully 90 percent of a child's brain development is accomplished by the age of **FIVE**.

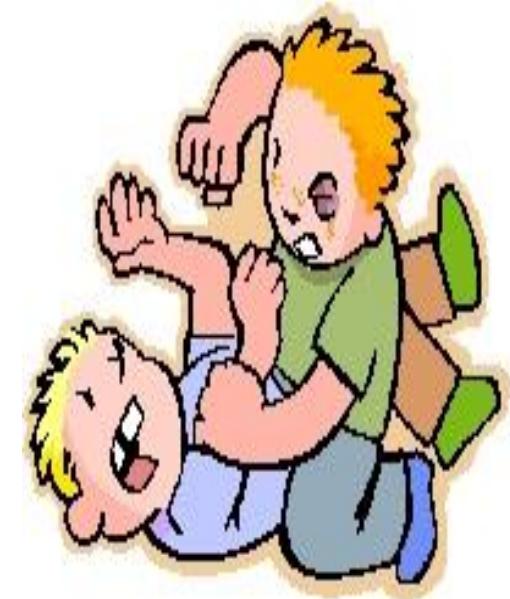
Lead poisoning results in diminished IQ.

While blood lead levels can be decreased by removing the source of exposure, neurological damage is **irreversible**.

Socio–Behavioral Effects of Lead Poisoning



- Irritability
- Aggression
- Hyperactivity
- Diminished attention span
- Criminal and violent behavior



Lead Poisoning in Tennessee:

Examining the Data



Adults – 10 µg/dL

Time Period	Age	Blood Lead Level	Number of Elevations
2016 calendar year	0–6 years	5 or greater <i>Confirmed!</i> !	538
2016 calendar year	18 and above	10 or greater	586
2017 calendar year	0–6 years	5 or greater <i>Confirmed!</i> !	452
2017 calendar year	18 and above	10 or greater	451

Lead poisoning is 100 percent PREVENTABLE!

Potential interventions include:

- **Educational outreach to employees**
- **Employer enforcement of OSHA regulations**
- **Investigation of work sites**



Together, we can
“stifle”
lead poisoning . . .

Just for Fun- AITF Trivia

Actors considered for the role of Archie:
Tom Bosley (“Mr. C) and Jackie Gleason.

Archie and Edith’s chairs are on display at the Smithsonian.

The first toilet flush on prime time was on
“All in the Family.”

In 2005, Bravo ranked Archie Bunker as #1
on the list of the
100 Greatest TV Characters of All Time.

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